

## Status Report on Hearing Aid Compatibility

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### Compliant Phone Models:

**Phone Model**

**ANSI C63.19 Rating**

**Motorola and Nokia models** TBA

TBA

### Product Labeling Information:

**Motorola** and **Nokia** have been active on the Alliance for Telecommunications Industry Solutions (ATIS) Incubator for Hearing Aid Compatibility (HAC). Both companies participate in ATIS Working Group 6, which is addressing labeling and educational insert language issues.

Draft version 2.1 of the suggested language for handset manuals or packaging inserts follows:

#### Hearing Aid Compatibility with Mobile Phones

When some mobile phones are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and phones also vary in the amount of interference they generate.

The wireless telephone industry has developed ratings for some of their mobile phones, to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated. Phones that are rated have the rating on their box or a label on the box.

The ratings are not guarantees. Results will vary depending on the user's hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated phone successfully. Trying out the phone with your hearing device is the best way to evaluate it for your personal needs.

**M-Ratings:** Phones rated M3 or M4 meet FCC requirements and are likely to generate less interference to hearing devices than phones that are not labeled. M4 is the better/higher of the two ratings.

**T-Ratings:** Phones rated T3 or T4 meet FCC requirements and are likely to be more usable with a hearing device's telecoil ("T Switch" or "Telephone Switch") than unrated phones. T4 is the better/higher of the two ratings. (Note that not all hearing devices have telecoils in them.)

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.

On **Nokia** product boxes, the rating will be included in the lower left-hand corner with other approval markings.

### Outreach Efforts:

**i wireless** has provided information on hearing aid compatibility to our call center and retail representatives. We also included the following verbiage on page 11 of our current magalog, under "Optional Features":

#### Help for the Hard of Hearing

Ask your **i wireless** representative about Nokia and Motorola phones and accessories that work with hearing aids.

**Motorola** attended the 2004 American Association of Retired Persons (AARP) "Life @ 50+ Expo." This exposition hosted over 20,000 people who experienced **Motorola** products and made their questions and opinions known.

**Motorola** also attended the 2004 American Academy of Audiology convention, exhibiting products usable by people

with hearing aids. This convention was attended by 7,000+ professional audiologists.

**Nokia** received the Urpo Siirala medal for its developmental work on accessible communication. The medal was given to **Nokia** at the International Federation of Hard of Hearing (IFHOH) 7th World Congress. **Nokia** had its own exhibition stand at the congress where visitors could test Nokia's solutions for the hard of hearing as well as get acquainted with a prototype of a hearing aid-compatible GSM mobile phone.

**Nokia** has created internal product design standards, initiated research projects to determine specific needs, and has ongoing training for employees worldwide addressing the importance and benefits of designing for accessibility.

Both **Motorola** and **Nokia** plan to participate in the Self Help for Hard of Hearing People (SHHH) convention this June, under the banner of ATIS.

**Motorola** and **Nokia** have web sites devoted to providing additional information about HAC:

<http://www.motorola.com/consumer/accessibility>.

<http://www.nokiaaccessibility.com/>

### **Retail Availability of Compliant Phones:**

Retail availability of compliant phones is projected to be in advance of the compliance dates set by the FCC. Since the industry is still working in the ATIS Incubator to learn how to measure the phones accurately and repeatably per the ANSI C63.19 standard, phones are not available on the retail market until the industry's test labs are validated to measure compliance.

100% of the handsets that **i wireless** carries have available accessories (adapters and neck loops) that allow the handsets to be used with TTY/TDD devices and hearing aids.

### **Efforts to Incorporate Hearing Aid Compatibility into Newer Models:**

Every single **Motorola** phone ships in the United States with a telecoil in the speaker for the specific purpose of coupling with hearing aid telecoils. Many current models work quite well with hearing aids, especially those aids with adequate immunity to electromagnetic interference.

**Nokia** is developing designs that include:

- RF fields that meet the requirements of the Report and Order
- Meeting production of standards-established audio band magnetic field near the earpiece (desired signal for hearing aid)
- Audio band baseband emissions from printed wiring board and battery that do not interfere with hearing aid.

### **Activities Related to ANSI C63.19 or Other Standards Work :**

**Motorola** and **Nokia** participate in the ATIS Working Group 4 incubator to address and revise standards related to hearing aid compatibility (HAC). Working Group 4 is comprised of manufacturers and independent test labs that have collaborated to measure 15 - 20 phones and several dipole antennas in round-robin fashion. This was completed for the purpose of harmonizing test methods throughout the wireless industry and making needed changes to the ANSI C63.19 standard upon which the FCC HAC Order of 2003 is based. The resulting output of this Working Group will help produce a much more usable C63.19 standard. Because a revised version of the C63.19 standard is still under ballot, ratings for specific phone models measured to a specific standard are not available. In the interim, testing is proceeding according to the current version of the ANSI C63.19 standard.

<b>Total Number of Compliant Phones Offered:</b>	TBA
<b>Total Number of Non-Compliant Phones Offered:</b>	TBA

### **Ongoing Efforts for Interoperability Testing with Hearing Aids:**

**Motorola** continues to engage hearing aid manufacturers, particularly during outreach efforts such as the American Academy of Audiology (AAA) convention and the Self Help for Hard of Hearing People (SHHH) convention.

**Nokia's** ongoing efforts include:

- RF-emission testing
- T-coil testing
- Earpiece studies
- Battery modification studies
- External coil studies
- Model specific CE-projects

**Information regarding differences in handset offerings among regions in service areas (For Service Providers only):**

All handsets are available at all i wireless points of distribution. There is no difference in handset offerings among regions in our service area.